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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,671	03/30/2004	Lee D. Whetsel	TI-30299.1	7725
23494	7590	05/08/2007	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			TORRES, JOSEPH D	
		ART UNIT	PAPER NUMBER	
		2112		
		MAIL DATE		DELIVERY MODE
		05/08/2007		PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/814,671	WHETSEL, LEE D.
	<b>Examiner</b>	<b>Art Unit</b>
	Joseph D. Torres	2112

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 30 March 2004.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-11 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) \_\_\_\_\_ is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) 1-11 are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date: _____
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date: _____	6) <input type="checkbox"/> Other: _____

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claim 1, drawn to a first connection formed between said test data input terminal and said boundary scan path input, and; a second connection formed between said test data output terminal and said boundary scan path output, classified in class 714, subclass 733.
- II. Claims 2-4, drawn to a multiplexer circuitry associated with said boundary scan path for selectively bypassing said one or more shared boundary scan cell groups such that only the one or more dedicated boundary scan cell groups exist between said input and output, classified in class 714, subclass 734.
- III. Claims 5 and 6, drawn to a second connection formed between the output of said second boundary scan path portion and said second multiplexer input; and, a third connection formed between the output of said first boundary scan path portion and said input to said second boundary scan path portion, classified in class 714, subclass 742.
- IV. Claim 7, drawn to resynchronization memory located in the serial path between two boundary scan cells, classified in class 714, subclass 731.

- V. Claim 8, drawn to entering the boundary scan test mode, and; performing a second serial communication to load data into all the scan cells within the boundary scan path, classified in class 714, subclass 729.
- VI. Claim 9, drawn to multiplexer circuitry for selectively partitioning the boundary scan path to include only the dedicated scan cells between said input and output, classified in class 714, subclass 726.
- VII. Claim 10, drawn to an input connection formed between the test data input terminal and the input lead of the first boundary scan path of said serial arrangement of boundary scan paths; and an output connection formed between the test data output terminal and the output lead of the last boundary scan path of said serial arrangement of boundary scan paths, classified in class 714, subclass 727.
- VIII. Claim 11, drawn to a boundary scan path between the test data input and the test data output, the path having two configurations, the first configuration including the at least one control scan cell and excluding the at least one data scan cell, and the second configuration including both the at least one control scan cell and the at least one data scan cell; and a multiplexer in the path selecting between the first and second configurations, classified in class 714, subclass 725.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I to Group VIII are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct if they do not

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overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable. In the instant case, subcombination Group I has separate utility such as for a first connection formed between said test data input terminal and said boundary scan path input, and; a second connection formed between said test data output terminal and said boundary scan path output. In the instant case, subcombination Group II has separate utility such as for a multiplexer circuitry associated with said boundary scan path for selectively bypassing said one or more shared boundary scan cell groups such that only the one or more dedicated boundary scan cell groups exist between said input and output. In the instant case, subcombination Group III has separate utility such as for a second connection formed between the output of said second boundary scan path portion and said second multiplexer input; and, a third connection formed between the output of said first boundary scan path portion and said input to said second boundary scan path portion. In the instant case, subcombination Group IV has separate utility such as for resynchronization memory located in the serial path between two boundary scan cells. In the instant case, subcombination Group V has separate utility such as for entering the boundary scan test mode, and; performing a second serial communication to load data into all the scan cells within the boundary scan path. In the instant case, subcombination Group VI has separate utility such as for multiplexer circuitry for selectively partitioning the boundary scan path to include only the dedicated scan cells between said input and output. In the instant case, subcombination Group VII has separate utility such as for an input connection formed between the test data input

terminal and the input lead of the first boundary scan path of said serial arrangement of boundary scan paths; and an output connection formed between the test data output terminal and the output lead of the last boundary scan path of said serial arrangement of boundary scan paths. In the instant case, subcombination Group VIII has separate utility such as for a boundary scan path between the test data input and the test data output, the path having two configurations, the first configuration including the at least one control scan cell and excluding the at least one data scan cell, and the second configuration including both the at least one control scan cell and the at least one data scan cell; and a multiplexer in the path selecting between the first and second configurations. See MPEP § 806.05(d).

The examiner has required restriction between subcombinations usable together. Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required

because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions require a different field of search (see MPEP § 808.02), restriction for examination purposes as indicated is proper.

Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art due to their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

A telephone call was made to Lawrence Bassuk on 5/3/2007 to request an oral election to the above restriction requirement, but did not result in an election being made.

Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species or invention to be examined even though the requirement be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques can be reached on (571) 272-6962. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Joseph D. Torres, PhD  
Primary Examiner  
Art Unit 2112

JOSEPH D. TOBRES  
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